

APPENDIX A

%!

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% PostScript program to illustrate tiling. Tiles the page in

% userspace and snap each tile to the largest clipping rectangle

% that contains all of the pixels in device space. Image the entire

% document with each tile set as a clipping rectangle. No stitching

10 % errors will appear.

% Control the tilesize and overlap by setting stepx,stepy and

% overlap.

% Put your test file in this procedure.

% NOTE: Verify that your testfile does not use initclip or

15 % initgraphics or any graphics operator that resets the pagedevice.

/DrawTestFile { (dancers.eps) run } bind def

% userspace step in x and y direction for tiling

% This creates 72 point or 1 inch squares

20 /stepx 72 def

/stepy 72 def

% tile overlap in userspace coordinates

% This creates 1/72 of an inch overlaps

25 /overlap 1 def

% get extents of the page to print

currentpagedevice /PageSize get (PageSize is) print dup == aload pop

/maxy exch def

30 /maxx exch def

% remember the default matrix

/defmatrix matrix currentmatrix def

35 % computeclip - convert clippath in userspace to device space

% coordinates. Modify to the nearest whole pixel included

% in the clipping path.

/computeclip % x1 y1 x2 y2 computeclip x1 y1 delx dely

{

4 -2 roll % x2 y2 x1 y1

transform ceiling exch ceiling exch % x2 y2 x1' y1'

4 -2 roll % x1' y1' x2 y2

5 transform floor exch floor exch % x1' y1' x2 y2

2 index sub % x1' y1' x2' dely

exch % x1' y1' dely x2'

3 index sub % x1' y1' dely delx

10 exch % x1' y1' delx dely

} bind def

% image the page through each tile by creating overlapping

% rectangles and then snapping them to the physical grid

15 0 stepx maxx {

/curx exch def

0 stepy maxy {

/cury exch def

/cursave save def

20

% compute the expanded tile

curx overlap sub

cury overlap sub

curx stepx add overlap add

cury stepy add overlap add

% snap the tile to the grid

computeclip

(rectclip is) print 4 array astore dup == flush aload pop

30

% move into device coordinates

[1 0 0 1 0 0] setmatrix

rectclip

35

/showpage { } bind def

% can also redefine initclip, initgraphics and setpagedevice

defmatrix setmatrix

DrawTestFile

```

    } for
} for

```

Year	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
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